

- B. Possible four drill stem tests to be run in Wolfcamp, Strawn and possibly two in the Morrow. All tests are to be run with tandem packers, safety joint, hydraulic jars and bumper sub. One quart samples of fluid recovered are to be taken: one at top, middle and bottom of fluid column. A portion of the bottom sample is to be submitted to Logging Company for determination of R_w prior to logging.

X. LOGS:

- A. Mud logging unit from 7,000' to T.D.

- B. Wireline

	<u>Interval</u>
First Run:	
- LL3/SNP/caliper/gamma ray (one tool string)	375' - 2,675'
Second Run:	
- Dual Laterolog/Micro SFL/gamma ray	2,675' - T.D.
- CNL/FDC/caliper/gamma ray	2,675' - T.D.

Scales

Gamma ray	0 to 100
SNP/CDL/CNL	30% to -10%
LL3/DLL/MSFL	.02 to 2000

Presentation

First Run:	
- SNP/GR/Caliper	5" per 100'
- LL3/GR/Caliper	5" per 100'
Second Run:	
- DLL/MSFL/GR	2" and 5" per 100'
- CDL/CNL/GR/Caliper	2" and 5" per 100'

XI. CASING PROGRAM:

- A. Surface: 13-3/8" OD, H-40, 48#, Range 3 ST&C new casing to be set 350'-375' when top of salt is encountered and cemented with 325 sacks of Class "C" cement with 1/4# Flocel and 2% CaCl. If necessary fill from top with redi mix to meet State requirements if cement does not circulate. Casing attachments: Guide shoe and one centralizer on shoe joint. Howco weld shoe and first collar, and tack weld top of shoe and bottom of first collar. WOC time: 18 hours. Install casing flange and pressure test casing and BOP's to 600#. Note: On all cementing jobs (surface, intermediate and long string) catch 1 sample of each type cement used and water used for mixing. Save samples for analysis in case cement does not set properly.
- B. Intermediate: 8-5/8" OD, K-55, 32#, Range 3 ST&C new casing to set at 2675' with a tail slurry of Class "H" cement with 5# salt, 10# sand, 1/2 of 1% CFR-2 and 1/4# Flocel per sack sufficient to cover the Red Sand, preceded by filler type cement. Casing attachments: Float shoe with insert float in first collar from bottom, 5 centralizers approximately 160' apart from 2675' to 2075' across Grayburg and San Andres zones. Howco weld and tack weld shoe and first collar. Hang weight of casing, as indicated on rig weight indicator at end of cement job on slips prior to cutting off casing. Reciprocate casing while cementing. Install casing spool. Nipple up BOP and test to 1000#. BOP's to be tested by independent testing company (Yellow Jacket) to the BOP's rated working pressure of 5000 psig prior to drilling into Wolfcamp formation. Be sure casing valve below BOP is open so casing is not pressured above its burst pressure during yellow jacket test.
- C. Production String:

0' - 1,500'	17.0#	N-80	LT&C
1,500' - 2,500'	17.0#	K-55	LT&C
2,500' - 6,000'	15.5#	K-55	LT&C
6,000' - 7,900'	17.0#	K-55	LT&C
7,900' - 10,000'	17.0#	K-55	LT&C